

DETAILED ACTION
EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with MacLane Key on 1/22/2009.

The application has been amended as follows:

Claims:

Claim 1 (Currently Amended) A method for fast channel changing in a multicast video distribution architecture, the method comprising:

buffering a multicast video stream segment at a server, the buffered multicast video stream segment including a first retained intra frame and a second retained intra frame, the first retained intra frame being before the second retained intra frame in the buffered multicast video stream segment;

detecting a channel change request that indicates a requested channel, the channel change request being from a requesting device, the requested channel corresponding to the buffered multicast video stream segment;

determining whether a first next decodable non-intra frame after the first retained intra frame is at least a joining time after a send point of the buffered multicast video stream segment;

in response to detecting the channel change request, transmitting to the requesting device a retained intra frame and no dependent frames for the requested channel as a unicast communication for static display, wherein,

if the first next decodable non-intra frame after the first retained intra frame is at least the joining time after the send point of the buffered multicast video stream segment, the transmitted retained intra frame is the first retained intra frame and the first next decodable non-intra frame after the first retained intra frame is a joining frame, and wherein

if the first next decodable non-intra frame after the first retained intra frame is less than the joining time after the send point of the buffered multicast video stream segment, the transmitted retained intra frame is the second retained intra frame and a second next decodable non-intra frame after the second retained intra frame is the joining frame; and

synchronizing a multicast joining operation to a multicast group corresponding to the requested channel, wherein synchronizing includes ensuring the joining frame is the oldest non-intra frame of the buffered multicast video stream segment received by the requesting device in response to the channel change request a first multicast frame after the multicast joining operation is the joining.

Claim 4-5 (Canceled)

Claim 7-55 (Canceled)

Claim 57 (Canceled)

Allowable Subject Matter

2. Claims 1-3, 6, 56 are allowed.
3. The following is an examiner's statement of reasons for allowance:

As to claims 1 and 56, the instant invention is directed to a fast channel change, keeping I-frame in a server, transmitting to the requesting device a retained intra frame and no dependent frames for the requested channel as a unicast communication for static display, determining which stored I-frame to transmit based on the join time. The relevant prior art of record does not teach or suggest, alone or in combination the feature of "...keeping I-frame in a server, transmitting to the requesting device a retained intra frame and no dependent frames for the requested channel as a unicast communication for static display, determining which stored I-frame to transmit based on the join time" as recited with respect to independent claims 1 and 56, which novel features are recited in the instant invention in combination with other features with respect to all the above independent claims.

As to claims 2-3, 6 these claims are dependent upon allowable claim 1, and are also considered allowable over prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUN FEI ZHONG whose telephone number is (571)270-1708. The examiner can normally be reached on Mon-Fri, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on 571-272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JFZ
2/12/2009

/VIVEK SRIVASTAVA/
Supervisory Patent Examiner, Art Unit 2426